

SunShot Prize: Race to the Rooftops



Inspired by
SunShot

U.S. Department of Energy

SunShot Prize: Race to the Rooftops

Webinar I: Overview and Guidelines for Teams

October 31, 2012

Disclaimer: The information presented in this webinar is not intended to amend, modify or substitute details provided in the SunShot Prize rules document released on September 12, 2012. Information presented in this webinar should be used in conjunction with the official rules and guidance located at:

eere.energy.gov/solar/sunshot/prize.html

Agenda

- **Section 1: Motivation**
- **Section 2: Goals & Target**
- **Section 3: Eligibility**
- **Section 4: Installation Specifications**
- **Section 5: Participation**
- **Section 6: Questions & Answers**

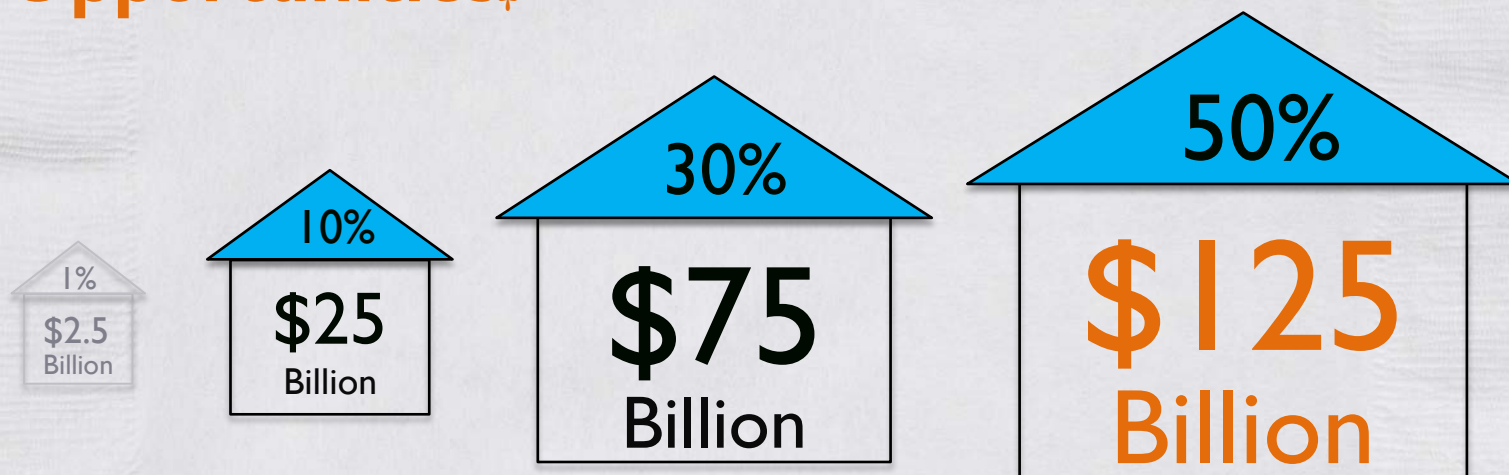
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Section I: Motivation

Market Potential

U.S. Households	100 million
Households suitable for rooftop PV*	25% (or 25 million)
Residential PV currently installed**	0.25 million

Opportunities‡



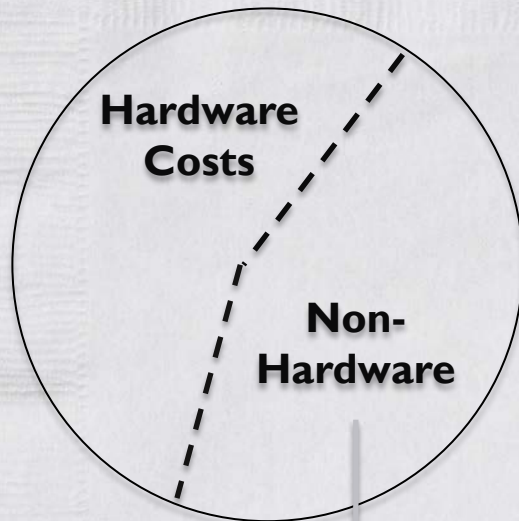
(*) Excludes renters, condo owners, shaded roofs, etc. Multiple source estimate see Denholm, P. and Margolis, R (2008), **Supply Curves for Rooftop Solar PV-Generated Electricity for the United States**, Golden, CO: National Renewable Energy Lab.

(**) Multiple source estimate see Seel, J., G. Barbose and R. Wiser (2012), **Why Are Residential PV Prices in Germany So Much Lower than in the United States**, Berkeley, CA: Lawrence Berkeley National Laboratory.

(‡) Estimate \$10k revenue per system (for demonstration purposes only.)

Costs and Trends

What is the cost breakdown?



Prices are declining, but not at the same rate.

PV Module
Average Price
Decline

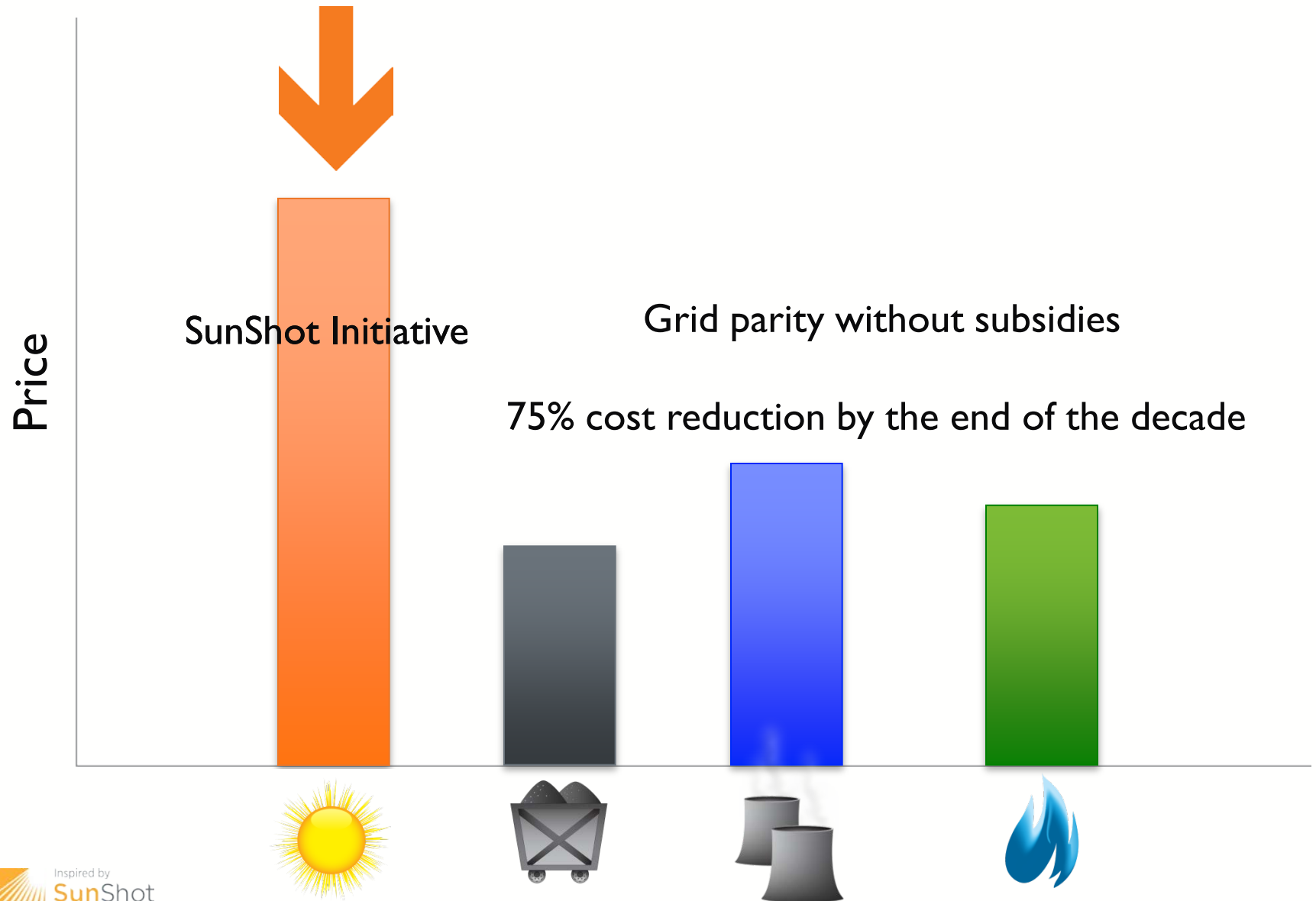
**-25%
Annually**

U. S. PV System
Average Price
Decline

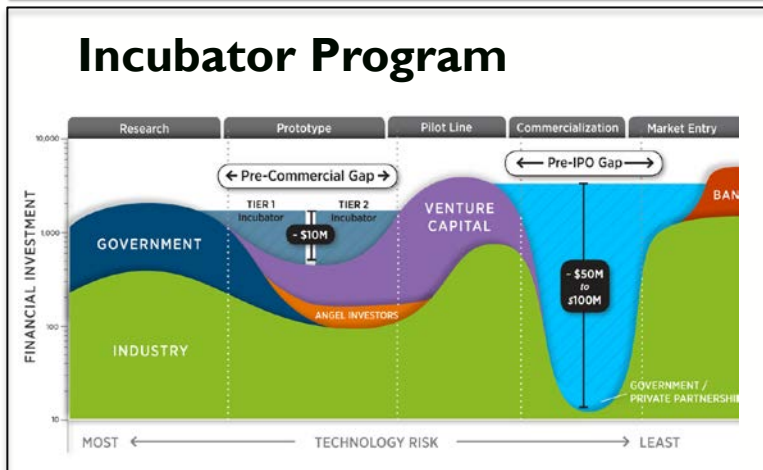
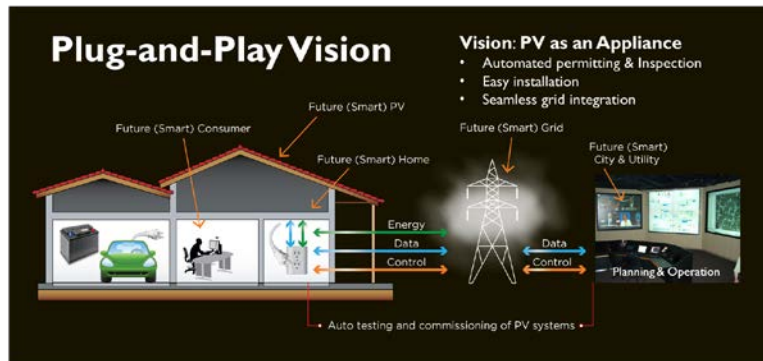
**-5%
Annually**

Often referred to as the “soft cost”

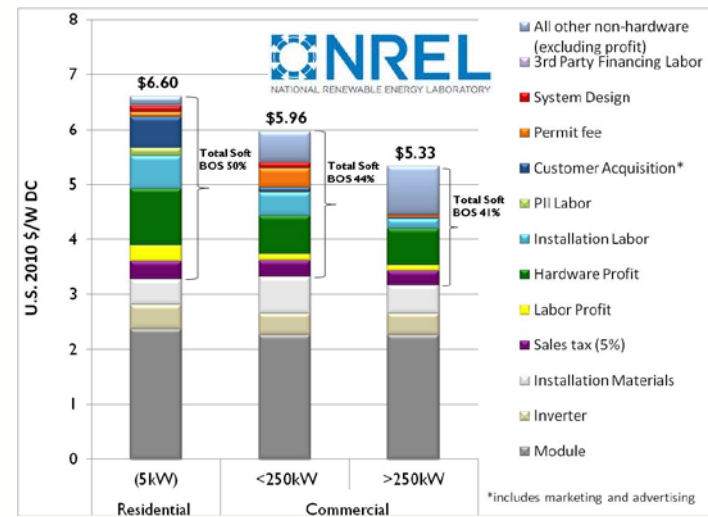
SunShot Initiative



SunShot: Tackling Soft Costs

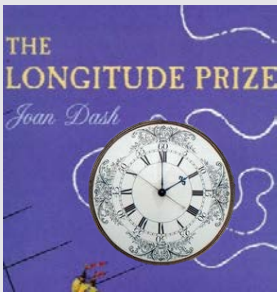


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Why a Prize?

- Prizes inspire us to reach new heights



Longitude Prize



Orteig Prize



DARPA Grand Challenge



Ansari X Prize

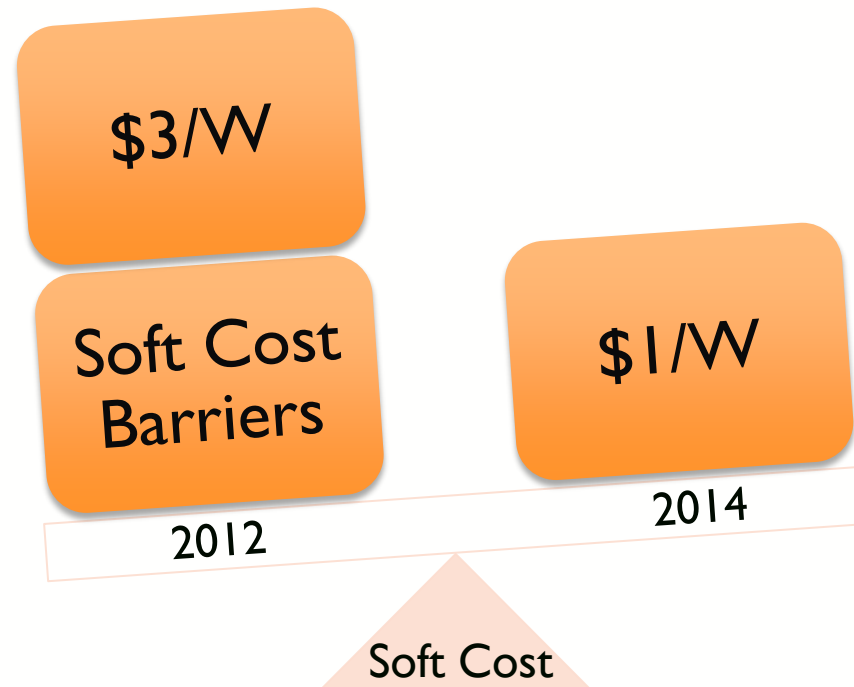
- Setting and meeting ambitious goals
- Not prescriptive of a specific approach
- Challenges a new class of innovators

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Section 2: Goals & Target

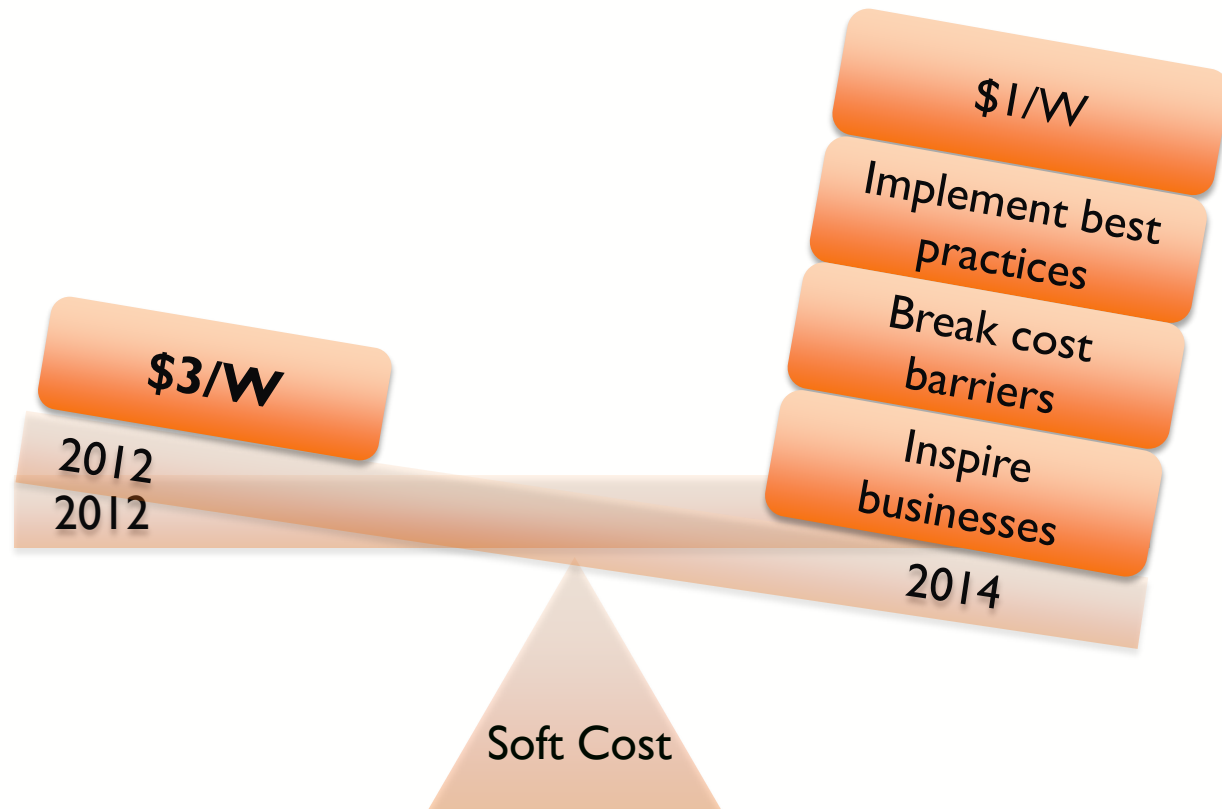
Prize Goals: Tipping the Scale

Soft costs are weighing us down



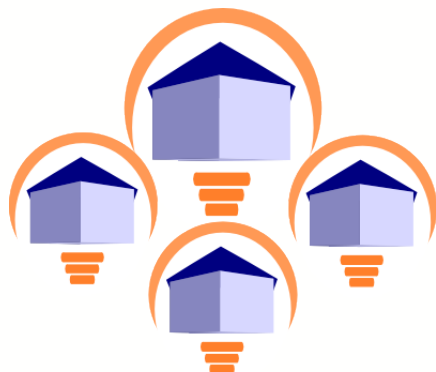
Prize Goals: Tipping the Scale

Let's tip the scale
making it faster, cheaper and easier to install solar



Target

Phase I + Phase II
5,000 + 1,000
Installations



2kW – 15kW

\$1/W

Average Pre-subsidy
Soft Cost

Prize

\$10m

Total Prize Awards



Prize Winner	Phase I	Phase II
First Team	\$5,000,000	\$2,000,000
Second Team	\$1,500,000	\$500,000
Third Team	\$750,000	\$250,000

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Section 3: Eligibility

Team Eligibility

C1. Team Lead

- Single legal entity
- In good standing
- Valid bank account for U.S. dollar transactions
- Insured

C2. Active Members

- Those with substantial team contributions must be named as team members

C3. U.S. Only

- Must be a recognized U.S. entity or foreign entity with a valid U.S. registration

C4. U.S. Local Authorities

- May be a team member but not a team lead

Team Eligibility

C5. Insurance

- Team lead must have general liability insurance with a min. of \$1 million/incident and a \$5 million umbrella
- Team members must have Federal government indemnification

C6. Risk Bearing

- Team members must agree to bear all risks and hold the Federal government free against all claims

C7. Content

- All documents must be in English and monetary figures in U.S. dollars

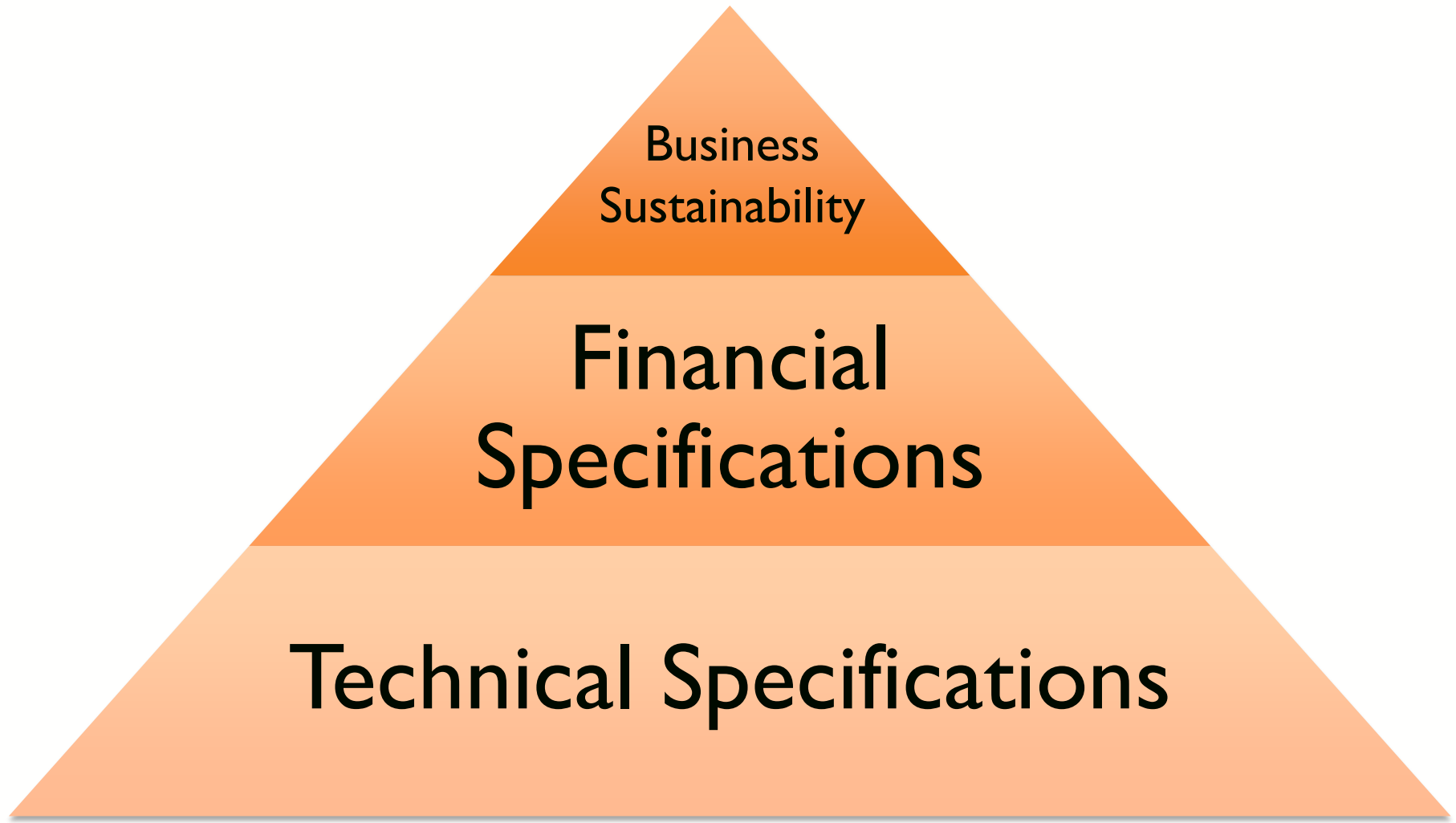
C8. Teaming Agreement

- Each member must be a signatory of a teaming agreement that establishes and defines relationships, responsibilities and resolution strategies for any potential conflict

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Section 4: Installation Specifications

Installation Specifications



Technical Specifications, Part I

Number of Installations

Phase 1:
5,000

Phase 2:
1,000

Rooftop Systems

2-15 kW/grid
connection

Rooftop-mounted on
residential,
commercial,
and/or public
structure

Eligible Systems

Completed
on or after
the
registration
date

Continuous
performance
period

Located in
designated
performance
regions

Permitting & Inspection

Permit and
inspection
completed

Meets
applicable all
laws/rules

Interconnection

Grid
connected

Meets all
local utility
rules

Technical Specifications, Part 2

Performance Projection and Monitoring

Expected kWh evaluated

Actual kWh tracked

Performance deviation \leq 25%

Product Safety & Certification

Components certified at UL 1703 IEC 61730 or comparable

Warranty Periods

20-year manufacturer performance

10-year system workmanship

1-year installer warranty

Operations & Maintenance Contracts

Valid O&M contract*

Insurance

For installations

For all workers including volunteers

Extended Insurance*

Soft Cost Equation

Total Price

For Host-Owned Systems:

The total pre-subsidy price paid by the customer

For Third-Party Owned Systems:

The maximum of the FMV and NPV based on pre-subsidy values

Hardware Cost

The value recorded on the bill of sale in an arms-length transaction or an equivalent arms-length transaction

Soft Cost

Permitting

Installation

Interconnection

Customer Acquisition

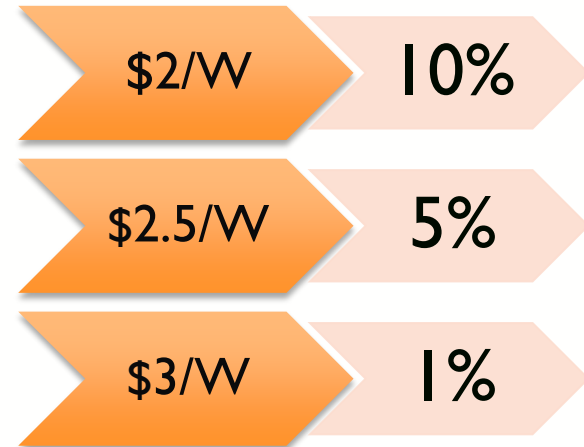
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Financial Specifications

Average
Soft Cost:

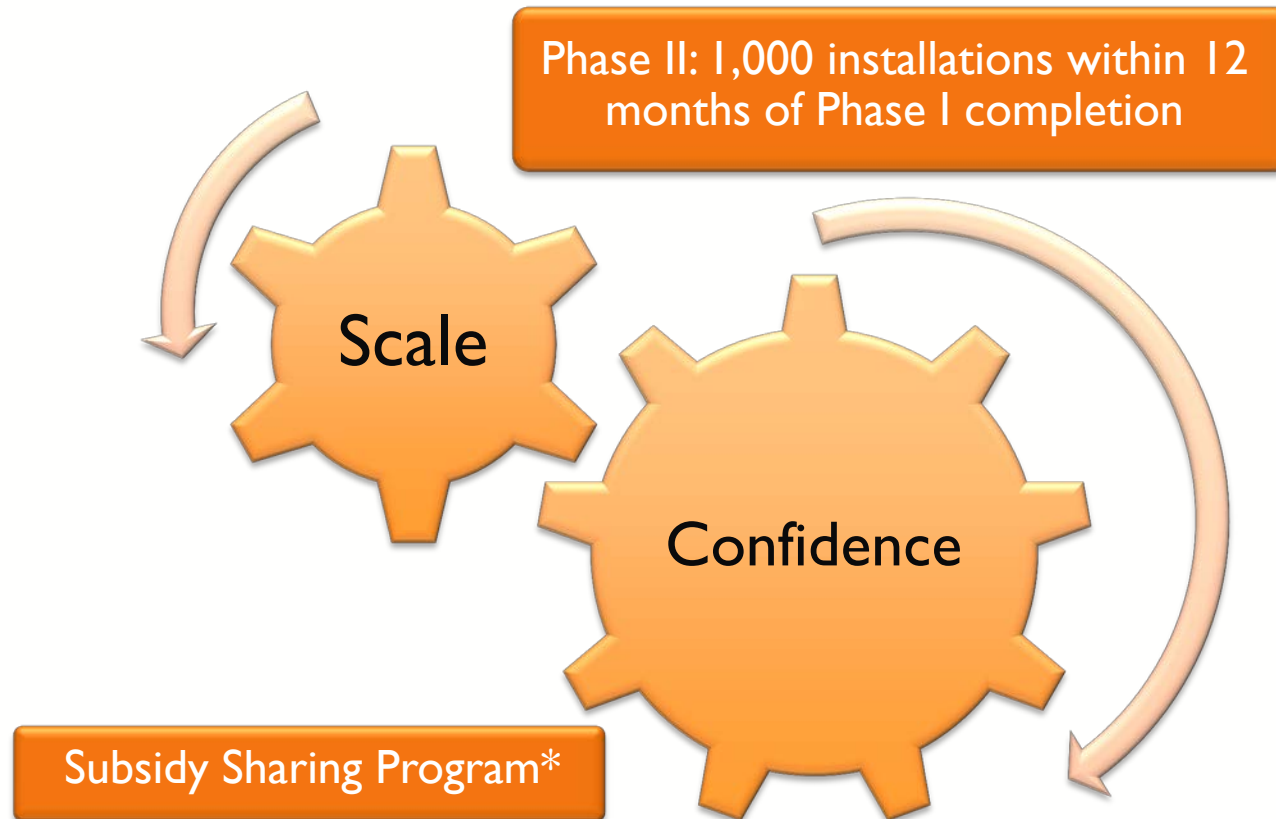
\$1/W

% of allowable installs with
soft cost values exceeding:



Demonstrating Business Sustainability

Demonstrate that the \$I/W soft costs target can be repeated using two indicators:



Subsidies?

Owner Subsidies

May claim subsidies and rebates

Total Sales Prices and Hardware Costs must be pre-subsidy values

Subsidy cascade filings must be available for audits

Subsidy Sharing*

Should share a portion of claimed subsidies and rebates with off-takers

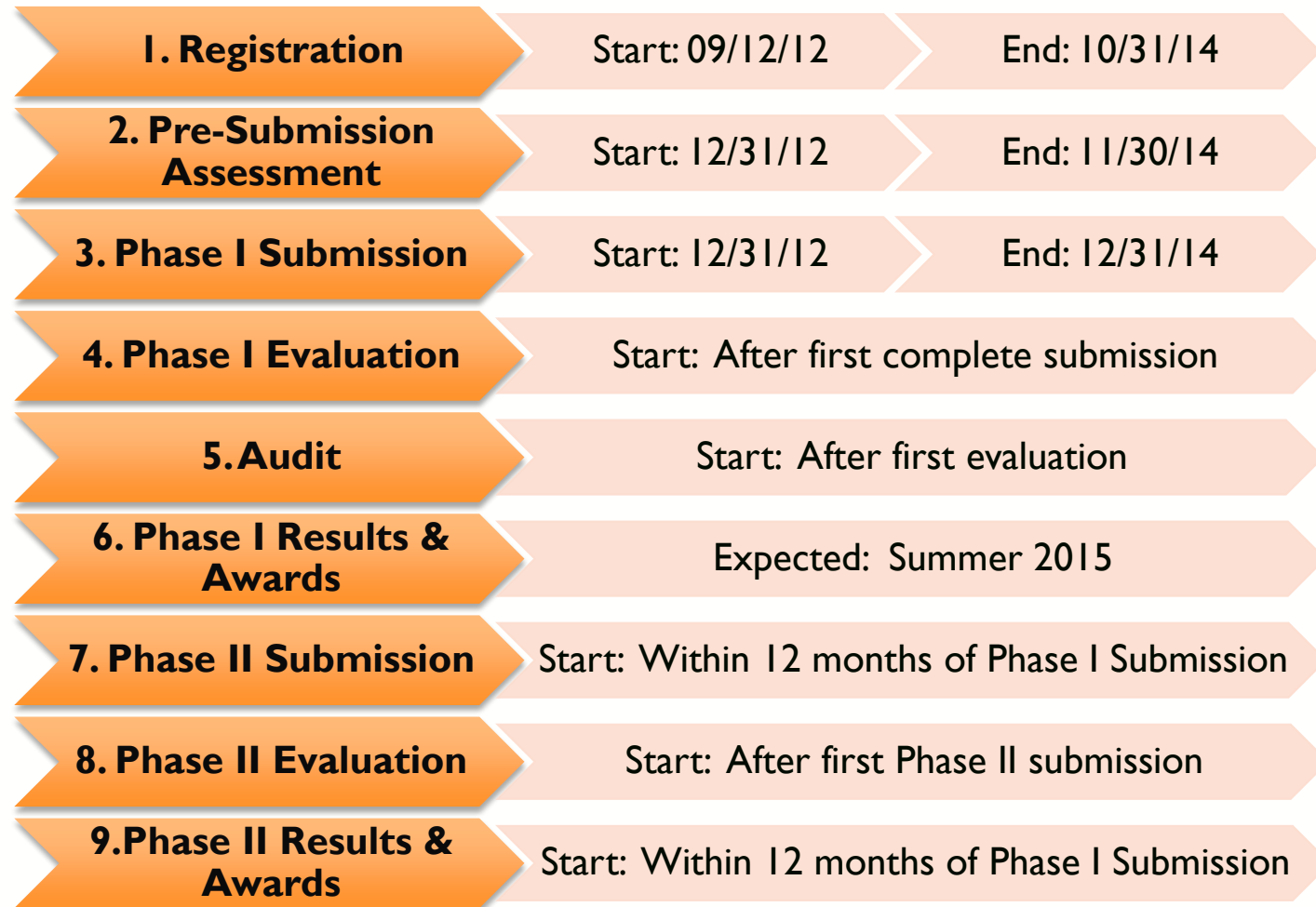
Total disbursements to off-takers are a sign of confidence in the business model

A portion by definition is greater than zero. No minimum portion requirement.

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Section 5: Participation

Participation Process

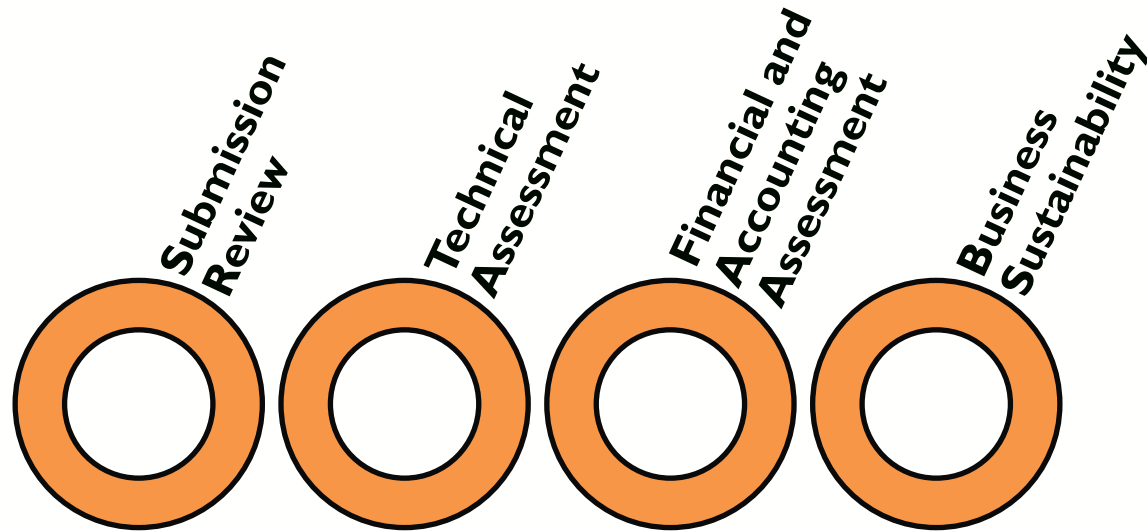


How to Sign up

1. Visit SunShot Prize webpage eere.energy.gov/solar/sunshot/prize.html
2. Look for “Getting Started”
3. Click on “register to participate”
4. Look for FOA # DE-FOA-0000766 in EERE’s Funding Exchange
5. Find the link
6. Create an account

Stay Updated
Sign up for our Newsletter
energy.gov/sunshot

Evaluating Winners



Evaluation Review Committee
Determines Winners

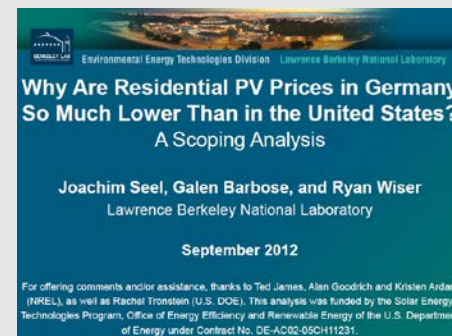
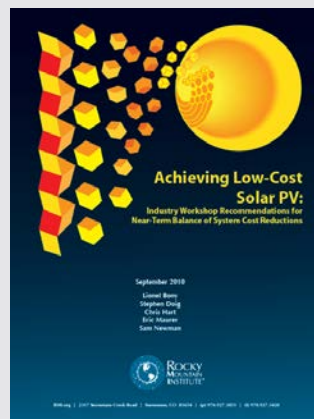
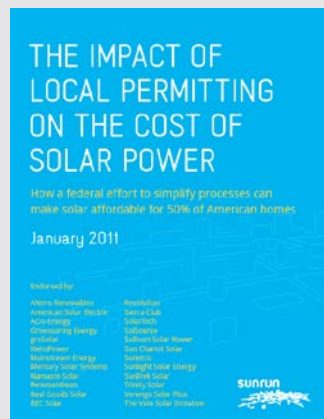


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Q & A Session

Please send additional questions or comments to:
sunshot.prize@ee.doe.gov

Resources



- SunShot Vision Study: U.S. Department of Energy, February 2012
- The Impact of Local Permitting on the Cost of Solar Power: SunRun, January 2011
- Achieving Low-Cost Solar PV: Industry Workshop Recommendations for Near-Term Balance of System Cost Reductions: Rocky Mountain Institute, September 2010
- Benchmarking Non-hardware Balance of System Costs for PV Systems in the United States using a Bottom-up Approach: National Renewable Energy Laboratory, May 2012
- Why Are Residential PV Prices in Germany So Much Lower Than in the United States? A Scoping Analysis: Lawrence Berkeley National Laboratory, September 2012



Thank You

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